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EDITOR OF THE MONTH

WALTER M. SOLOMON, M.D.

Cleveland, Ohio

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Council on Medical Education and Hospitals of the American Medical Association

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College of Medical Evangelists, Los Angeles[1]	Fred B. Moor, M.D. A. H. Carlson	None	a-b-c-d	12 mos.	Sept	20	$225	Cert. or Dipl.
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State University of Iowa Medical School, Iowa City	W. D. Paul, M.D. Miss Olive C. Farr	State Univ. Iowa	f	12 mos.	Sept	—	$200	**
University of Kansas School of Medicine, Kansas City[3]	Donald L. Rose, M.D. Mrs. Ruth G. Monteith Miss Lilyan G. Warner	Univ. Kans.	a-b-c[2]	12 mos.	FebSept	20	$ 80[3]	Cert. or Degree
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Boston University, College of Physical Education for Women, Sargent College, Cambridge, Mass.	Kenneth Christophe, M.D. Miss Adelaide L. McGarrett	Boston Univ. Med. Sch.	H.S.	4 yrs.	Sept	20	Varies	Cert. or Degree
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Columbia University, College of Physicians and Surgeons, New York City[1]	William B. Snow, M.D. Miss Josephine L. Rathbone	Columbia Univ.	a-c[6]	2 yrs.	Sept	35	$400 yr.	Cert. or Degree
New York University School of Education New York City[1]	George G. Deaver, M.D. Miss Elizabeth C. Addoms	New York Univ.	a-b-d	12 mos.	Sept	40	$525	Cert. & Degree
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University of Texas School of Medicine, Galveston[1]	G. W. N. Eggers, M.D. Miss Ruby Decker	Univ. Texas	a-b-d[8]	12 mos.[7]	Jan	6	$141[8]	Certificate
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University Southern California, Los Angeles	O. L. Huddleston, M.D. Charlotte Anderson	Univ. of S. Calif	d[2]	12 mos.	Sept	16	$374	Certificate
Albany Hospital, Albany, N. Y.	John Ghormley, M. D. Catharine Graham	None	a-b-c	9 mos.	Sept	6	$200	Certificate
Mayo Clinic Section on Physical Medicine, Rochester, Minnesota	Frank H. Krusen, M.D. Miss Ruth Ryan	None	a-b-c	12 mos.	July	20	none	Certificate

* Courses are so arranged that any of the entrance requirements will qualify students for training. a = Graduation from accredited school of nursing; b = Graduation from accredited school of physical education; c = Two years of college with science courses; d = Three years of college with science courses; e = Four years of College with science courses; H. S. = High school graduation; f = degree in physical education or sciences.

† Currently eighteen Navy nurses are enrolled in a six-month emergency course.

1. Male students admitted.
2. High school graduates admitted to four-year course leading to degree.
3. Non-residents charged additional fee.
4. High school graduates admitted to four-year course leading to degree from Tufts College.
5. Tuition for degree course is $400 per year.
6. College graduates admitted to twelve-month certificate course.
7. Effective 1947 class.
8. Effective 1946 class.

‡ Reprinted in part J. A. M. A. 133:1149 (April 12) 1947.

** At the end of nine months the students can register in the graduate school for a degree of master of science in Physical Therapy.

THE PHYSIOLOGIC BASIS FOR THERAPEUTIC EXERCISE

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Section on Physical Medicine,
and
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Section on Physiology
Mayo Clinic
ROCHESTER, MINN.

Therapeutic or corrective exercise may be described as the scientific application of bodily movement in treatment of disease or of malfunction. It would appear that the definition of this subject should be more comprehensive. It should carry the implication that somewhat extensive knowledge is necessary to use exercise or bodily motion adequately for therapeutic purposes. Dorland's definition of the term "kinesiology" reads: "The sum of what is known regarding muscular movements, especially hygienic or therapeutical movements." This definition implies that wide basic knowledge is necessary and, were it not that confusion of terms might result, the definition could be taken to apply to therapeutic exercise. One who accepts the responsibility of supervision of therapeutic exercise should have knowledge of mechanical, biochemical and biologic laws in relation to mechanical efficiency and knowledge of physiologic and pathologic-physiologic reactions resulting from malfunction. Such a person must give special study to intricate physiologic processes in their relation to muscular and bony structures and must give consideration to the relationship of malfunction and normal function to organs of the body which otherwise are unaffected.

In general, the teaching of therapeutic exercise, or kinesiology, has been grossly neglected in regard to its use in the field of medicine. The makers of medical curriculums perhaps can be blamed to a certain degree for this neglect. In most medical schools little functional anatomy is taught in relation to the musculoskeletal mechanism. Usually, also, the physiology of muscle is not presented from the standpoint of its general function in regard to motion. Little attempt is made to correlate biophysical and purely physical laws with motion and locomotion. Even though motion is perhaps the most important function of life and the musculoskeletal system therefore constitutes an extremely important part of the body, much less time is spent in teaching the function of this system than is spent in teaching the functions of systems of lesser consequence. The use of corrective exercise has been of much greater interest to the physician practicing physical education and to the militarist than to the average physician. Correlation is lacking between the kinesiologist on the one hand, on the other, the physiologist, the anatomist and the practitioner of medicine. Much of the investigative work has been done by people interested in only one field, such as physical education or physiology of muscle. Great benefits might result from more interest in, and wider knowledge of, the basic principles of corrective exercise. The purpose of this discussion, therefore, is to present a few of those principles which seem to be basic, some of which are well known but little used from a practical standpoint.

Structure of Muscles

Despite the fact that skeletal muscles of man make up about 50 per cent of the body weight, there is less attention paid to this system than to any

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